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A METHOD OF CONTROLLING DATA SAMPLING CLOCKING OF ASYNCHRONOUS
NETWORK NODES IN A FRAME-BASED COMMUNICATIONS NETWORK

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ABSTRACT OF THE DISCLOSURE

A method of controlling data sampling clocking of asynchronous network nodes, each asynchronous network node having a local clock and transmitting and receiving packets to and from an asynchronous network according to an asynchronous network media access protocol. An asynchronous network node capable of transmitting and receiving packets on the asynchronous network is designated as a master node. Each non-master asynchronous network node which desires to synchronously transport packets across the asynchronous network is designated as a slave node. A master node clock of the master node is synchronized with a slave node clock of each slave node. Each slave node clock is continuously corrected compared with the master node clock to smooth slave clock error to an average of zero compared with the master clock as a reference using timestamp information from the master node. A derivative clock at the slave node is derived from the continuously correcting each slave node clock to control data sampling at the slave node.

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